



# Discussion Paper BRIEFS

Food Consumption and Nutrition Division of the International Food Policy Research Institute

*Discussion Paper 150*

## The Impact of *PROGRESA* on Food Consumption

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Together with 16 other Millennium Development Goals, the global community has committed itself to halving by 2015 the proportion of the world's population that lives in poverty and suffers from hunger. While the goals of reducing poverty and hunger may seem intertwined, a review of the existing literature suggests this may not be the case. This paper contributes to this debate, using an analysis based on the impact of Mexico's Programa de Educación, Salud y Alimentación (*PROGRESA*).

### **Background**

Since 1997, *PROGRESA* has provided cash transfers linked to children's enrollment and regular school attendance and to health clinic attendance. The program also includes in-kind health benefits; nutritional supplements for children up to age five, and pregnant and lactating women; and instructional meetings on health and nutrition issues. In 2000, *PROGRESA* reached about 40 percent of all rural families and about 11 percent of all Mexican families.

This paper explores whether *PROGRESA* improves the diet of poor rural Mexicans—a major objective of the program. As such, this evaluation provides insights into whether interventions designed to alleviate poverty also succeed in reducing hunger.

### **Data and Methodology**

When *PROGRESA* began in 1997, it was not administratively feasible to provide benefits to all households simultaneously. Therefore, communities were randomly selected for participation (treatment localities), and the rest were introduced into the program at later phases (control localities). We exploited this random allocation to explore whether *PROGRESA* improved the diet of poor rural Mexicans and to gain insights into whether interventions designed to alleviate poverty also succeed in reducing hunger.

We used a longitudinal sample of approximately 24,000 households from 506 communities located in the first states receiving *PROGRESA* benefits. Of the 506 communities, 320 were designated as treatment and 186 as control communities. In control localities, the incorporation of beneficiary households into *PROGRESA* was postponed until the year 2000.

We first compared potential beneficiaries in treatment areas to those in control areas. This provided an estimate of the impact of *PROGRESA* inclusive of errors in the operational aspects of the program. Next we examined whether *PROGRESA* has an impact conditional on households receiving monetary benefits.

To explore whether *PROGRESA* led to an increase in the physical consumption of food, we constructed a measure of caloric availability at the household level expressed in calories per person per day. The November 1998 survey round revealed several noteworthy features. The first is the monotony of the diets of poor households, with calories from grains accounting for about 75 percent of caloric availability. Second, there was a statistically significant difference in the unconditional means across these poor households (though the magnitude of the difference was small). However, as we moved from November 1998 to June 1999, and then to November 1999, the magnitude of these differences increased. By November 1999, households receiving *PROGRESA* benefits had, at the mean, 7.8 percent more calories available per person per day than did comparable households in control localities. Particularly striking were the increases in calories consumed from vegetables and fruits and meat and animal products.

A parametric analysis revealed that the conditional impact of *PROGRESA* on poor households was generally smaller than the unconditional impacts and that there was little evidence of much of a statistically significant impact on caloric availability as of November 1998. This was not surprising, given that an examination of administrative records indicated that *PROGRESA* had undertaken only limited operations at the

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time of this survey. By contrast, in June 1999, households receiving *PROGRESA* benefits in treatment localities obtained 4.3 percent more calories than did comparable households in control localities. And in November 1999, the effect is even higher: households receiving benefits obtained 7.1 percent more calories than did comparable households in control localities, with much of these gains coming about through

increased acquisition of calories from vegetable and animal products—a finding consistent with the view of respondents that PROGRESA was enabling them to “eat better.”

We examined whether these changes in caloric acquisition were driven by increased incomes or by another feature of PROGRESA, the *platicas*. As part of the program, beneficiaries attend a series of lectures (*platicas*) where information on health and nutrition is provided by a doctor or nurse. Although participation in PROGRESA raises the amount of calories acquired from grains and other foods, this would appear to be entirely due to PROGRESA’s income effect. However, even after controlling for this effect, participation in PROGRESA appears to have an impact on the acquisition of calories from fruits, vegetables, and animal products. It is possible that this reflects the influence of the *platicas* where beneficiaries attend, where they are encouraged to eat a more diverse diet, including more fruits, vegetables, milk, and other animal products. There is some evidence that information conveyed during these meetings spills over and positively affects the behavior of nonbeneficiaries in treatment localities. We also observed this effect in households with preschool children, which is significant for Mexico, where poor quality diets inhibit the physical growth of children less than 30 months.

Lastly, we examined whether provision of the *papilla* nutrition supplement—another component of PROGRESA—crowded out the acquisition of calories, but found no evidence that this was the case.

### **Conclusions**

In examining the impact of PROGRESA on household food consumption, we had to be conscious of the survey design with which we worked, the manner in

which PROGRESA operated, and the need to specify the functional form relationship between caloric acquisition and incomes. Controlling for differences in household and municipality characteristics, as well as differences in prices among municipalities, we found that there is no evidence of a statistically significant impact of the program on caloric availability as of November 1998, not surprising, since PROGRESA had begun only limited operations at the time of this survey.

However, there is evidence of a significant impact in June and November 1999. By November 1999, households receiving PROGRESA benefits in treatment localities obtained 7.1 percent more calories than did comparable households in control localities. The impact is greatest on the acquisition of calories from vegetable and animal products. Some of this impact is an income effect; some may also reflect attendance at *platicas*.

More generally, these results suggest that efforts to reduce poverty in the developing world will also reduce hunger.

**Keywords: caloric availability, food consumption, PROGRESA, Mexico**

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